

AGRS

 Advanced Gamma-Ray Spectrometer


Advanced Gamma-Ray Spectrometer is an intelligent, self-calibrating spectrometry system using large volume NaI (TI) detector arrays. AGRS is designed for wide use in geological and geophysical exploration and mapping as well as in environmental monitoring, radiation protection and nuclear surveillance. The AGRS performs a which eliminates the need for undertaking daily calibrations using radioactive sources. The self-calibration. Featuring each individual detector processing, an AGRS unit can contain 2, 4 or 5 detectors of large volume 4L each. The AGRS unit can be used as a stand-alone unit with simple USB-flash drive data transfer, chained up with other AGRS units to maximize effective detection surface and volume efficiency, or integrated with a data-acquisition system to full system equipped with additional sensors. For stand-alone functioning, the AGRS unit will require only power supply and GPS data

Benefits

- Fully automated Self Calibration routine
- No Calibration Sources Required
- Large detector volumes with high efficiencies for low level
- Stand- Alone Operation with internal data recording

Key Figures

<8.5%

➔ Resolution @662 KeV

20_{keV} - 3MeV

➔ + Cosmic

Up to 2048

➔ Channels

Product description

The AGRS Gamma spectrometer is an advanced digital Spectrometer utilizing NaI (TI) detectors with individual detector handling. It is a hardware-software designed system, exhibiting simplicity, easy interfacing, and substantial versatility.

AGRS-2	Two 4Liter downward-looking NaI(Tl) crystals Weight ~50kg
AGRS-4	Four 4Liter downward-looking NaI(Tl) crystals Weight ~95kg
AGRS-5	Four 4Liter downward-looking NaI(Tl) crystals One 4Liter upward-looking NaI(Tl) crystal Weight ~115kg

Performance Characteristics

- Energy detection range 20 KeV to 3 MeV
- Detector Volume: 18.8 Liters downwards looking, 4.2 Liters upwards
- 256 / 512 / 1024 channels
- Output is fully linearized, and the Poisson Distribution is not affected
- Individual detector processing
- Real-time stabilization on natural radioactive elements
- Extremely wide dynamic range: up to 250,000 cps per detector
- Insignificant Dead Time
- Individual detector Acquisition and Live time is provided
- Stabilization time of less than 40 seconds on the ground
- Data acquisition is accomplished via Ethernet, which eliminates bandwidth problems and permits remote monitoring and trouble shooting
- Internal Data Storage for use in Stand-alone mode
- Selectable sampling rates
- Elevated level of self-diagnostics
- Automatic HV calibration and linearization based on natural radioactive elements (radioactive sources are NOT required). This permits field replacement of NaI (TI) detectors and/or photomultiplier tubes
- GPS connectivity & synchronization
- Input power: 10 to 35 VDC Cosmic Radiation recorded in the last channel for data processing

